VISION ZERO

Honolulu COMPLETE STREETS

Honolulu Safer Streets Plan

Virtual Public Workshop

December 12, 2022

NELSON NYGAARD

PBR HAWAII & ASSOCIATES, INC.

CITY AND COUNTY OF HONOLULU · STATE OF HAWAII

AGENDA

1. Introductions
2. What is Vision Zero?
3. Serious Injury & Fatal Traffic Crashes on O'ahu
4. Safe Streets Toolkit
5. Next Steps

Introductions

City and County of Honolulu Department of Transportation Services (DTS) Team

- Christopher Clark, DTS Chief Planner
- Renee Espiau, Complete Streets Administrator
- Daniel Alexander, Vision Zero Coordinator

Consultant Team

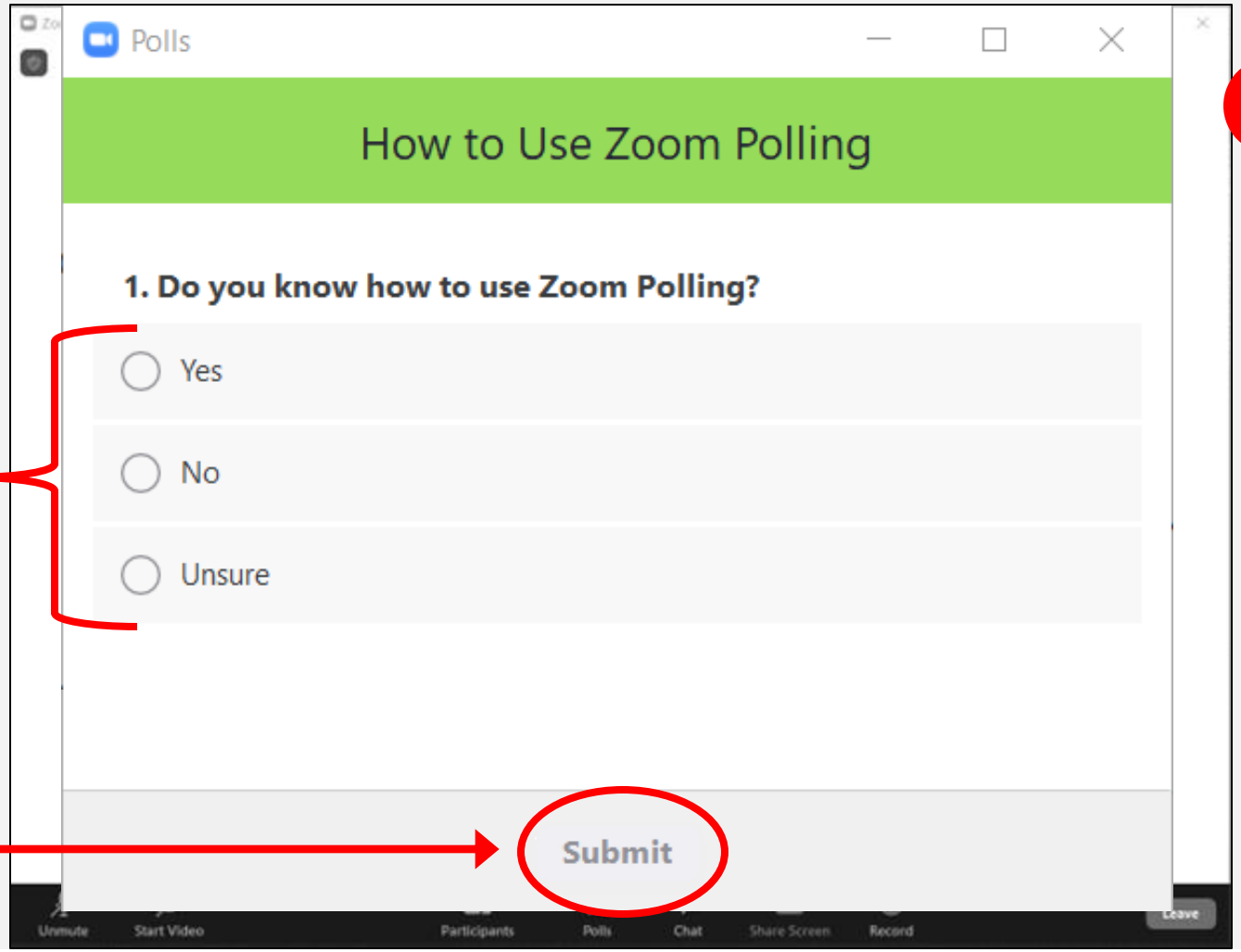
- Nelson\Nygaard
- PBR Hawaii

How to Participate

- Polling Questions
  - Look for this icon on slides that will ask polling questions

- Interactive Whiteboard
  - There will be opportunities to add your comments and reactions to the data presented.
- Breakout Groups
  - There will be a chance to break out in groups to further discuss your thoughts and experiences in a small group setting

ZOOM Housekeeping - Polling



1 Choose your response

2 Click submit

3 If you choose 'Other' or if you wish to clarify your answer, please submit your thoughts in the chat

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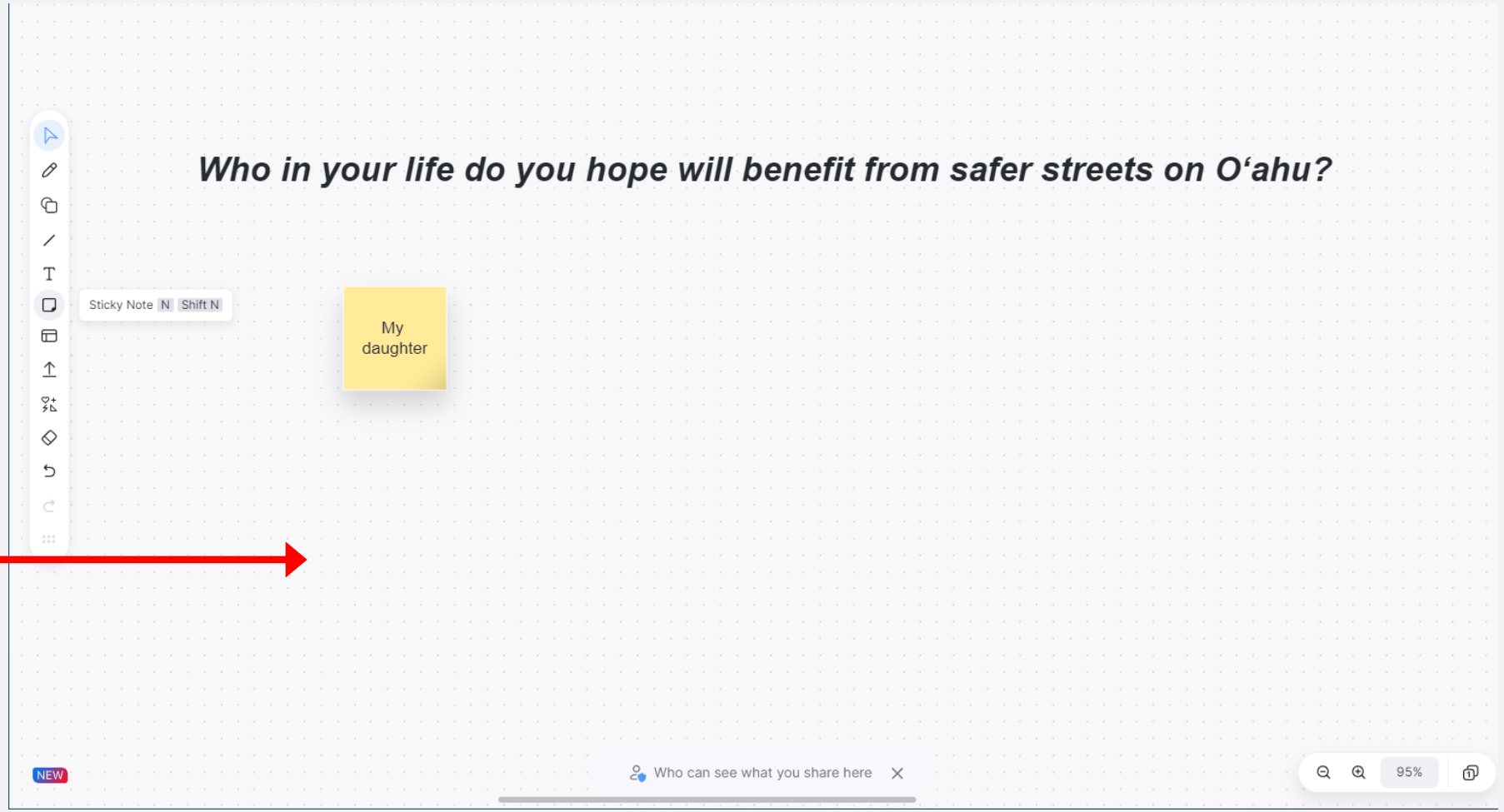
ZOOM Housekeeping - Whiteboard

1. **Interactive Toolbar**

2. **Provide comments + reactions, within the space provided.**



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What is Vision Zero?

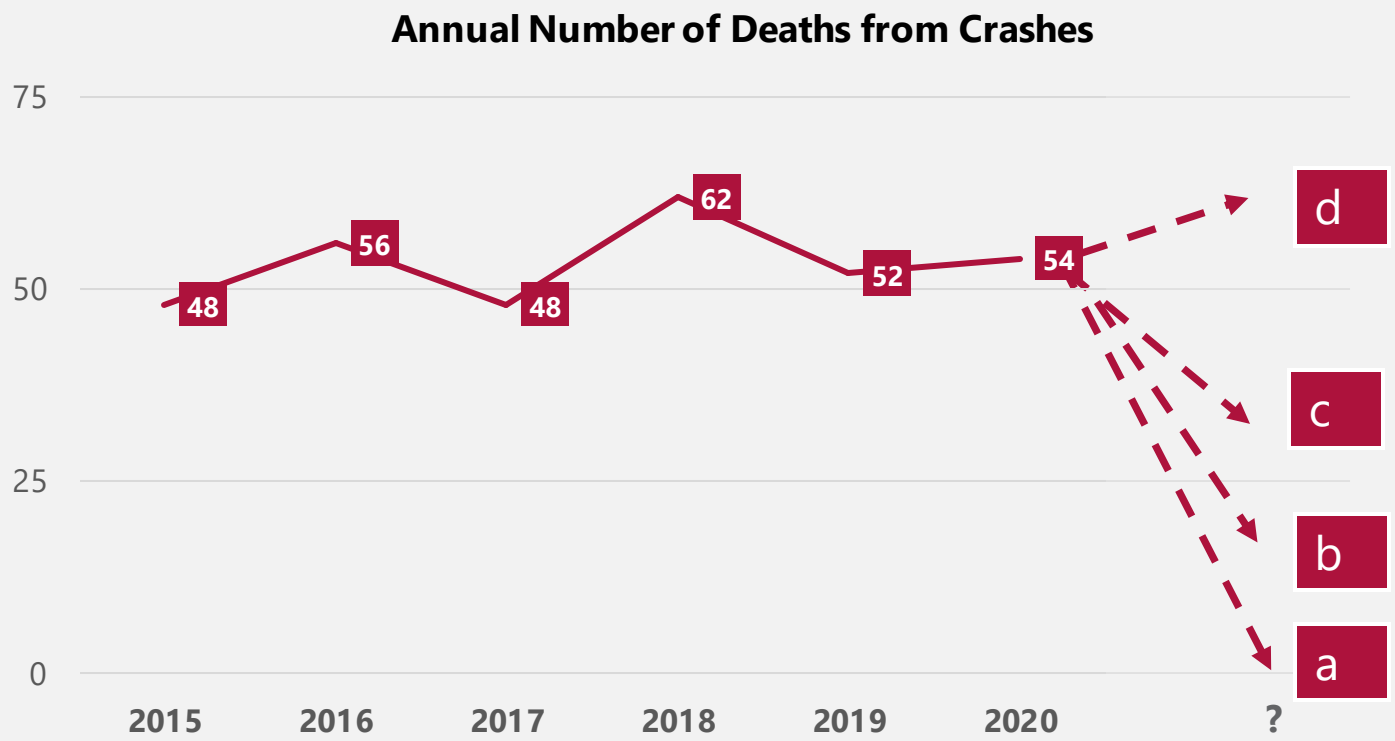
future

Why do we need a plan for safer streets?

On average, one person a week dies on O'ahu streets.

We can prevent crashes.

What is an acceptable target for traffic deaths on O'ahu?



Data Source: Hawai'i Department of Transportation SHACA. The State of Hawaii, Department of Transportation, has provided this crash information under the protection of 23 USC 407. This information may not be used in any Federal or State court proceeding in any action for damages arising from any occurrence at a location mentioned or addressed in the information provided.

What is an acceptable target for traffic deaths on O'ahu?

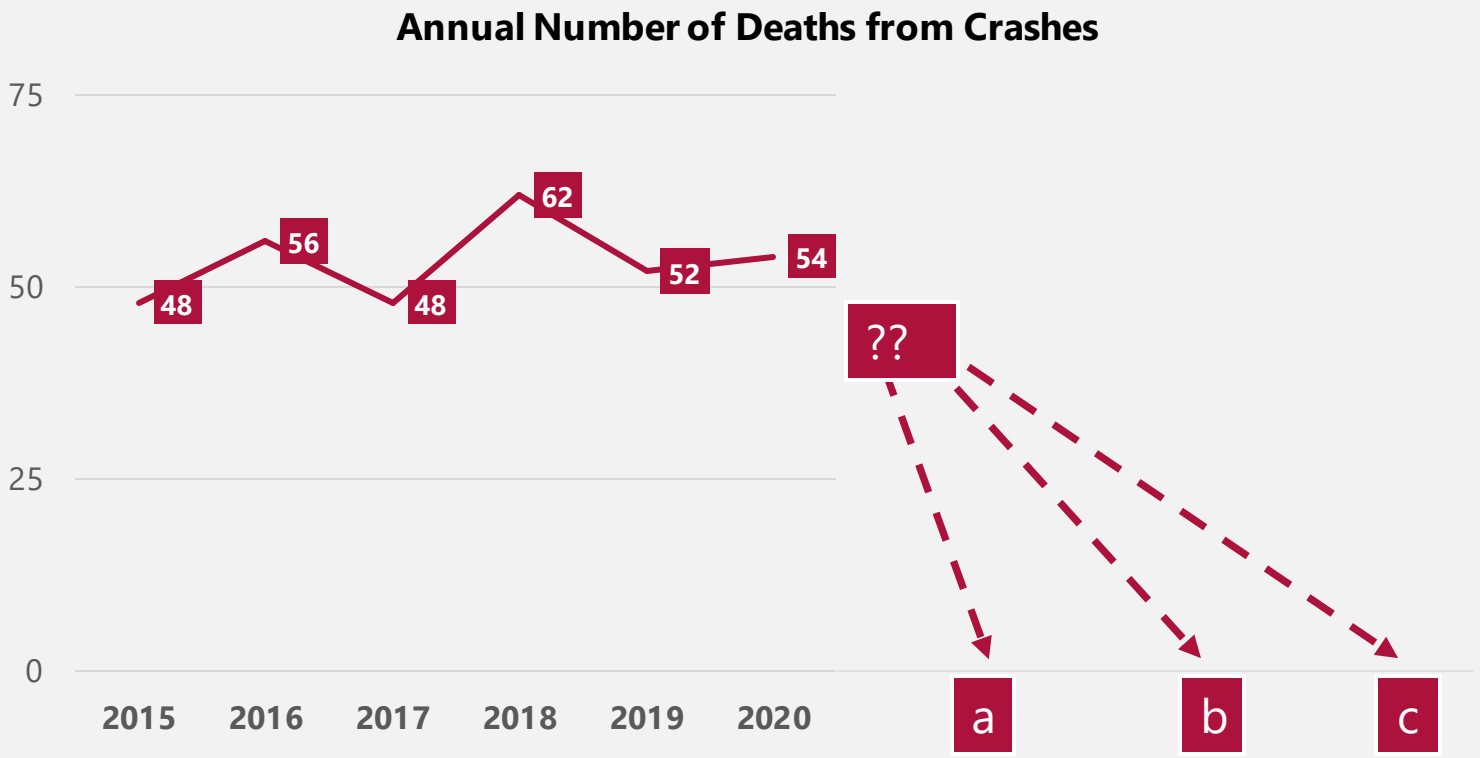
a. **0**

b. **1-20**

c. **21-40**

d. **Status quo is acceptable/ realistic (about 50)**

What should our target be for reducing or ending traffic fatalities?



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Keeping your target in mind, when should we achieve our goal?

a. **2030**

b. **2035**

c. **2045**


NEWS NOW
Live News Weather Sunrise Sports
From heartbreak to action: A grieving mom's mission to save lives on Hawaii's roadways
Chanda Park is offering another ride sharing service to prevent fatalities involving drunk drivers.

50 lives

Our Community's Response

Who in your life do you hope will benefit from safer streets on O'ahu?

"My kids and their kids."

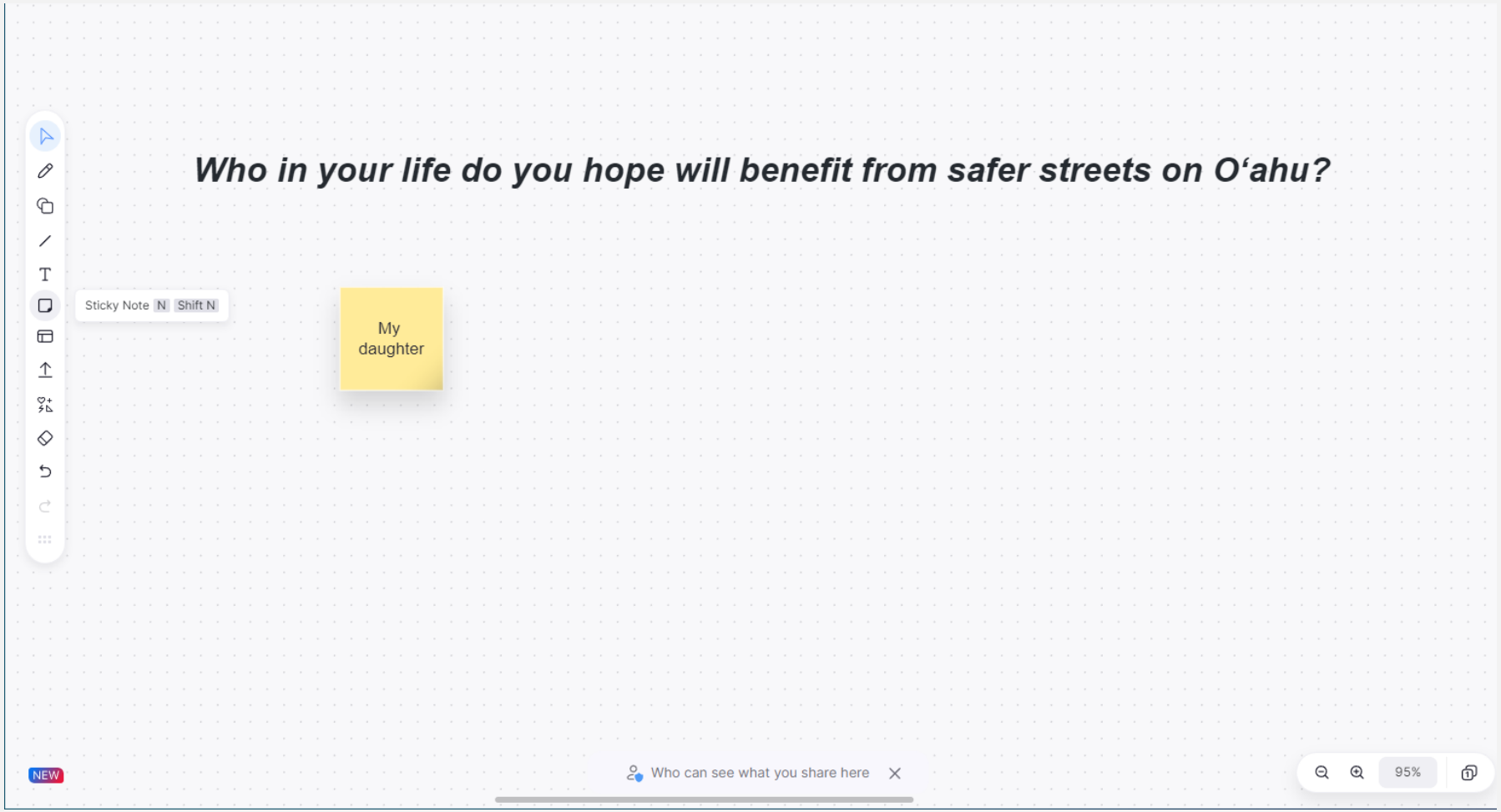
"My son."

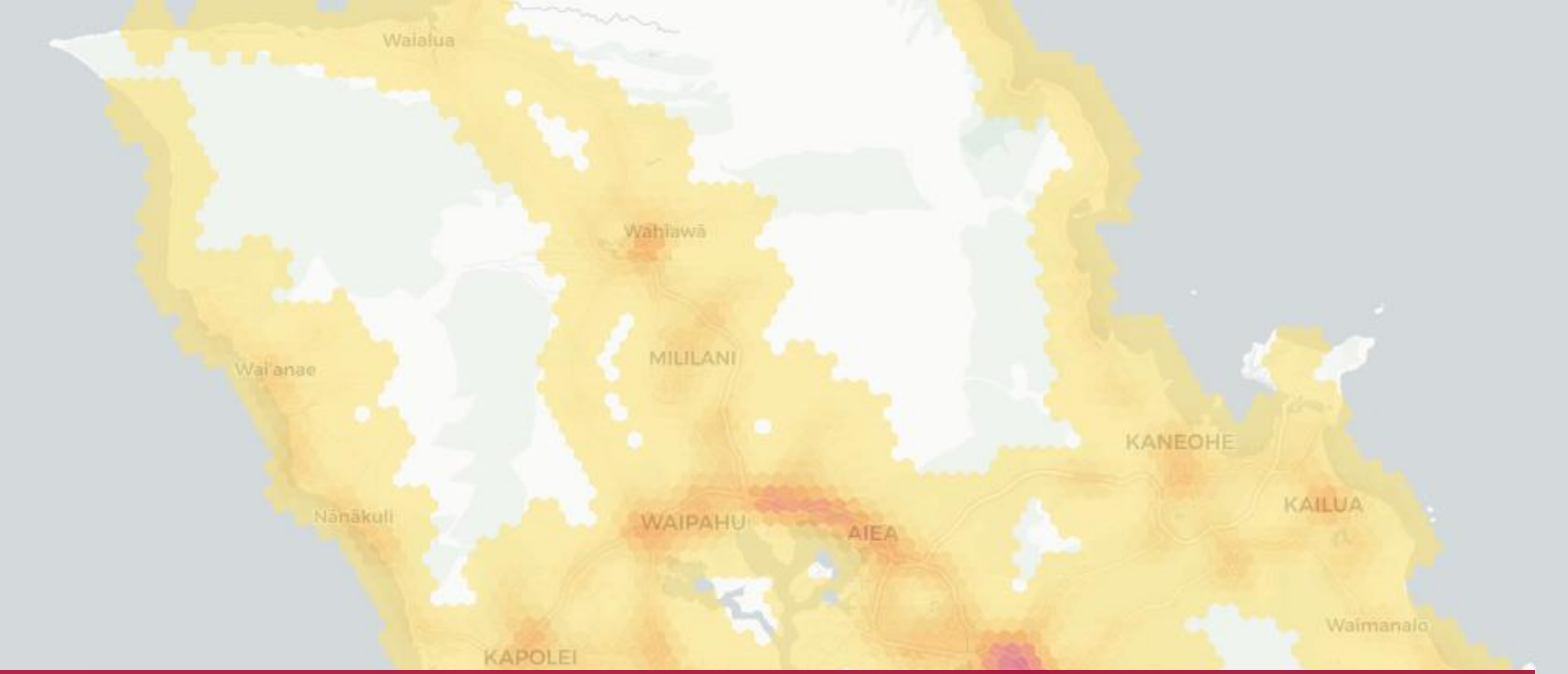
"My toddler."

"Everyone!"

"Me, my father, and my mother."

Our Kuleana to Safe Streets





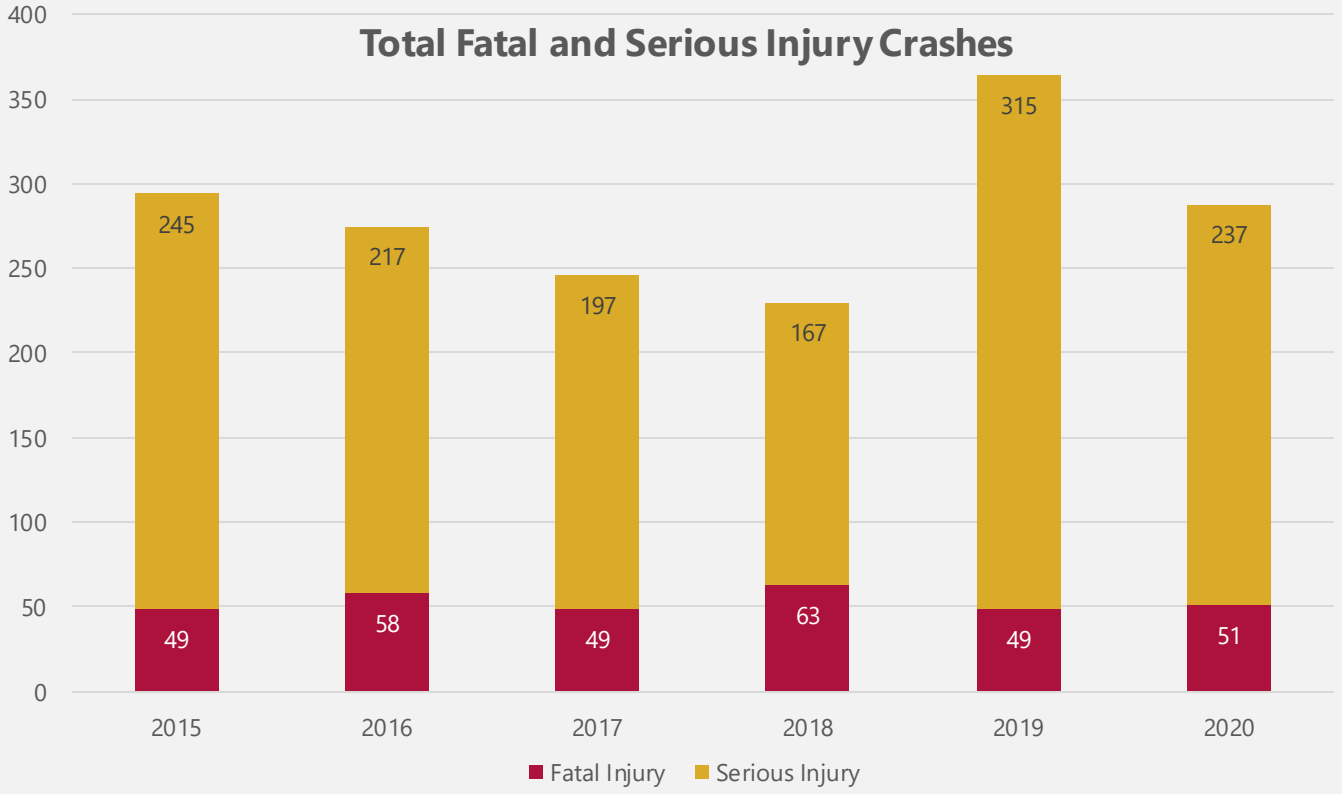
Serious Injury & Fatal Traffic Crashes on O'ahu

A Focus on Serious and Fatal Crashes

The Vision Zero crash analysis focuses on:

- **Fatal and serious injury crashes** for *all* modes
  - Sometimes we compare trends to minor injury crashes
- **All injury crashes** involving people walking, rolling, and bicycling
- Excludes crashes on freeways (includes only surface roads)

O'ahu Crash Trends



Data Source: Hawai'i Department of Transportation SHACA. The State of Hawaii, Department of Transportation, has provided this crash information under the protection of 23 USC 407. This information may not be used in any Federal or State court proceeding in any action for damages arising from any occurrence at a location mentioned or addressed in the information provided.

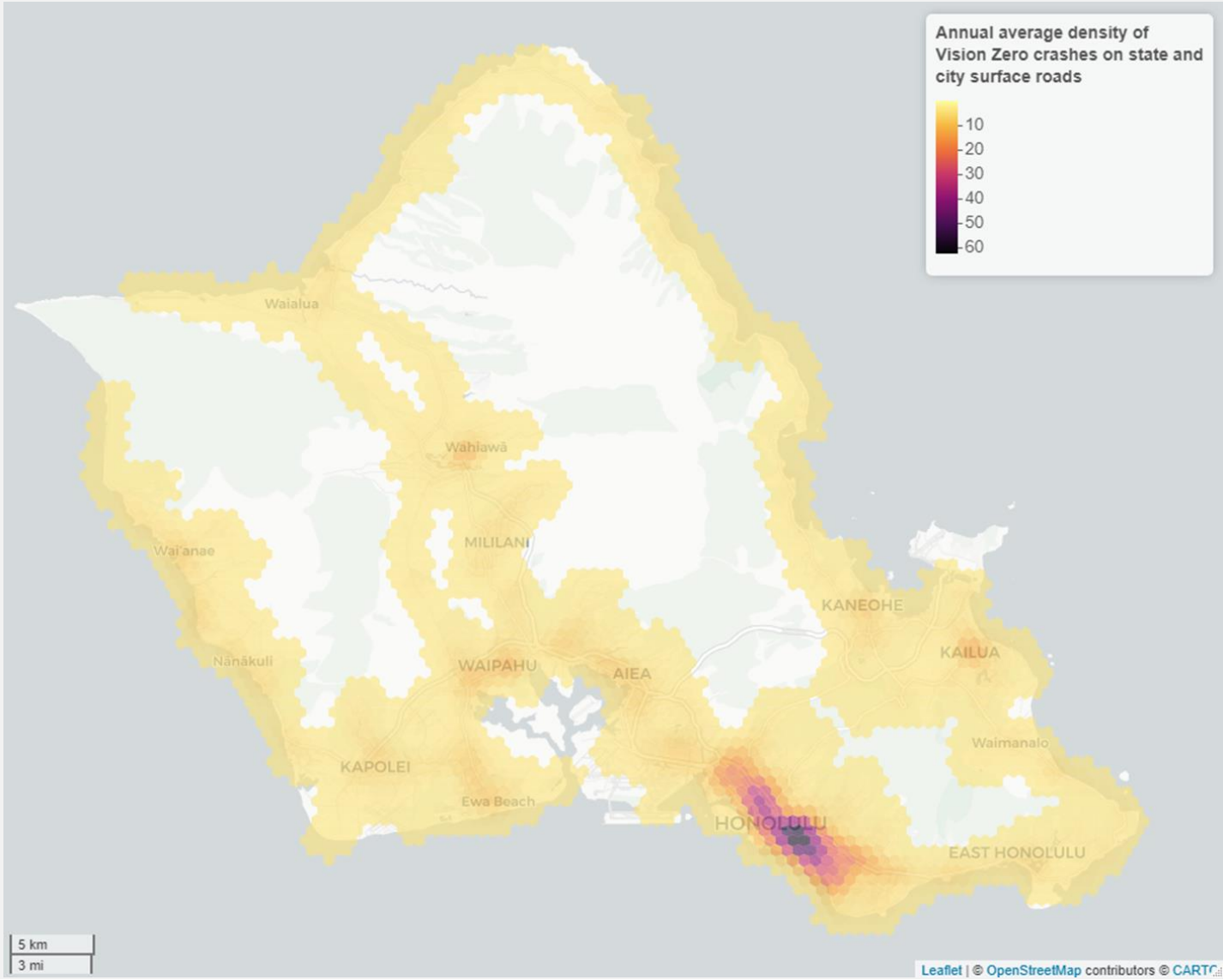
There has been roughly 1 traffic death every week for the last 10 years.

Crashes resulting in death and serious injuries due to speeding are increasing.

During 2020, traffic went down while fatal and serious injury crashes remained the same.

Where do crashes take place?

The greatest concentrations of Vision Zero focus crashes are in the **urban core of Honolulu,** with smaller concentrations in community centers outside of Honolulu.



Where do crashes take place?

STREET TYPES - ARTERIALS

Where do crashes take place?

STREET TYPES – MAIN STREETS

Who is most impacted by crashes?

- **PEOPLE WALKING**
  - Even though people walking only make up 15% of all crashes islandwide, **people walking make up 36% of people killed** in crashes.

- **KŪPUNA**
  - **Kūpuna age 65 and older make up 41% of people killed** while walking compared to 17% of O'ahu's population

What causes fatal and serious injury crashes?

FAILURE TO YIELD

INATTENTION

IMPAIRMENT

SPEED

What causes fatal and serious injury crashes?

INATTENTION

33% of fatal crashes

IMPAIRMENT

33% of fatal crashes

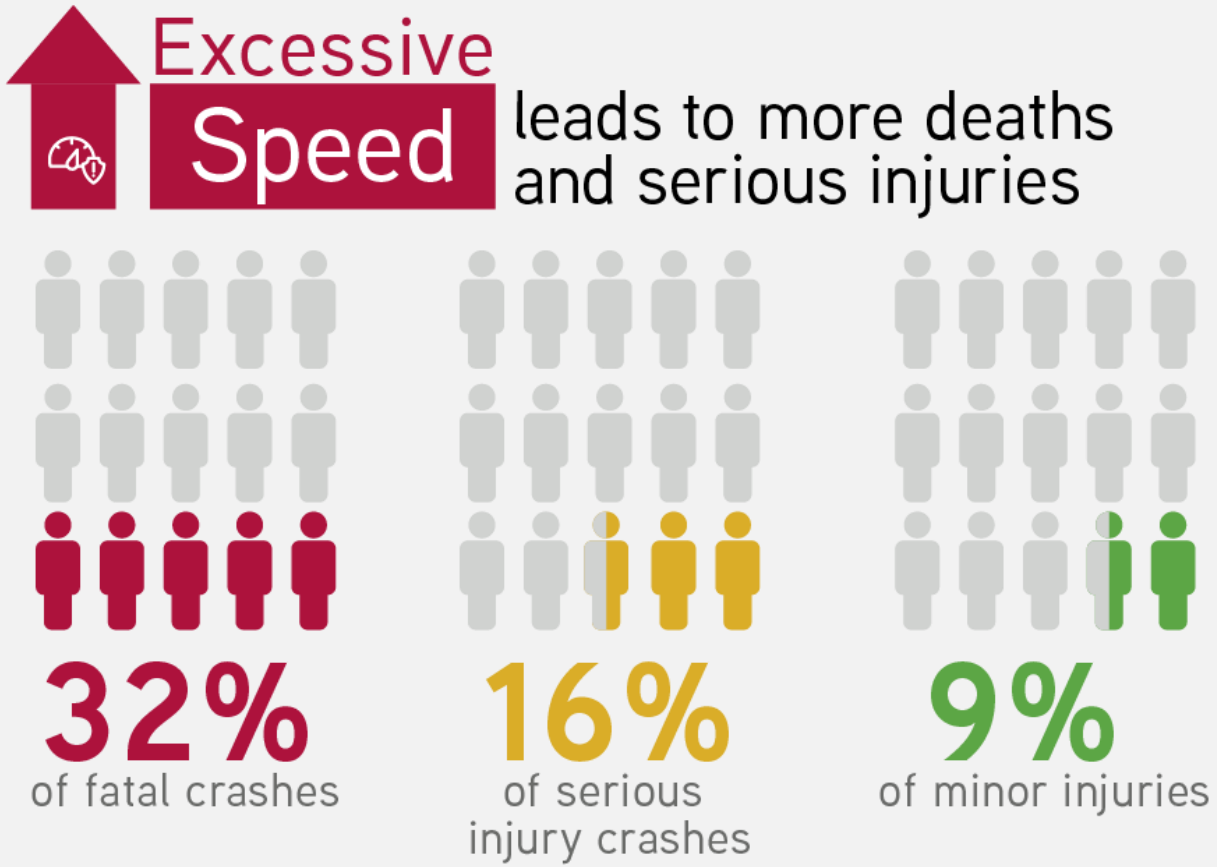
SPEED

32% of fatal crashes

FAILURE TO YIELD

10% of fatal crashes

What causes fatal and serious injury crashes?



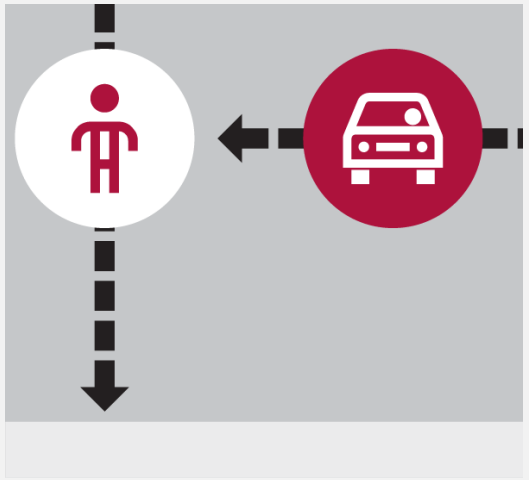
Nearly 1/3 of fatal crashes are caused by excessive speed.

Even small increases in speed greatly increase the risk of death.

What are the most common types of crashes for people walking?

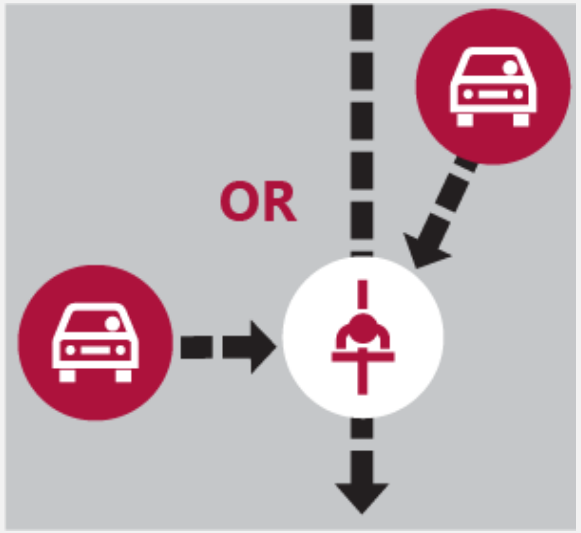
Crossing in Crosswalk: Motor Vehicle Turning Left
82% at signals

Crossing in Crosswalk: Motor Vehicle Going Straight
44% at signals

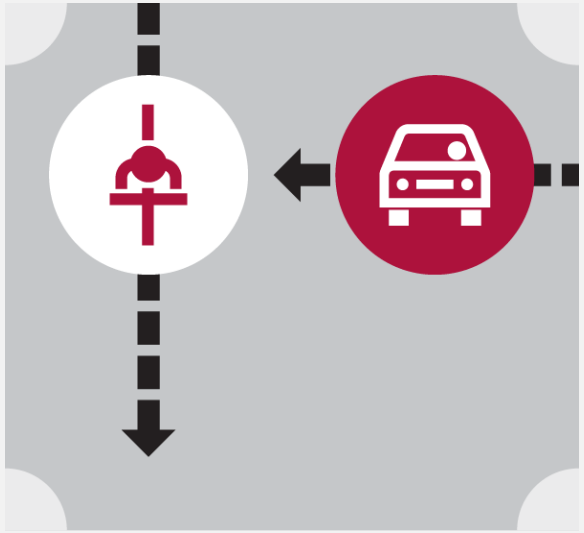


Crossing Outside of a Crosswalk

What are the most common types of crashes for people riding bikes?

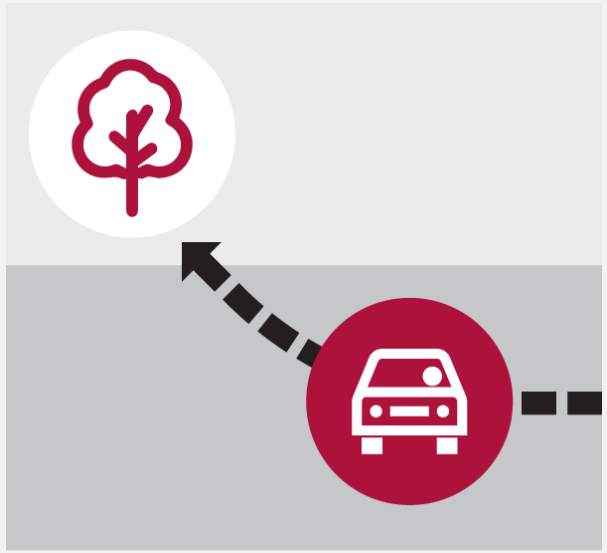


Riding on Street with No Bike Facilities

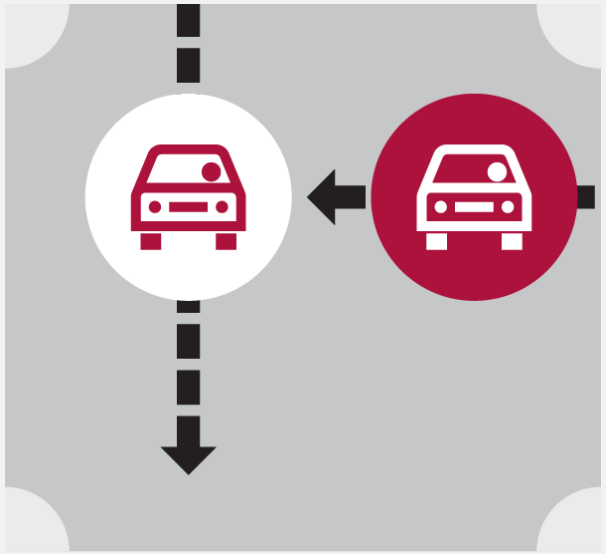


Riding at Intersections

What are the most common types of crashes for motor vehicles?



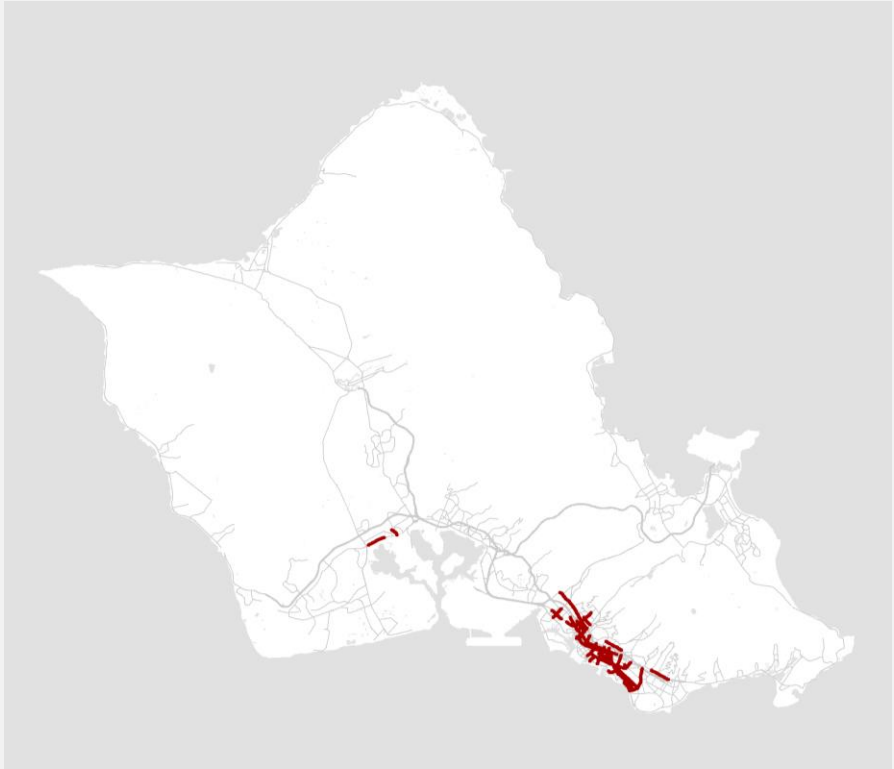
Hitting an Object
(ex: fence, utility pole, tree, ditch, parked car)



Broadside

Preliminary High-Injury Locations

Bicyclist Injuries



Pedestrian Injuries

Motor Vehicle Fatal and Serious Injuries

Crash Analysis Discussion

- Discussion Session – 10 Minutes
  - Your reactions on the data findings and your experiences on O'ahu's roads.
- Participants:
  - Facilitators will launch the discussion whiteboard where you can add your mana'o.
  - After the allotted time, facilitators will conclude the discussion and resume the presentation. All content provided on the whiteboard will be available for public review.

Discussion – Your Experiences

- **What resonates with you from the crash analysis?**
- **What else would you like to know about crashes on O'ahu?**
- **Did those trends point out specific systemic needs or opportunities?**

Our vision is to reduce serious traffic injuries and fatalities on O'ahu streets to 0.

Local Reflections

"Kalihi has bad to no sidewalks in a high-density area, seniors, especially those with walkers and wheelchairs have to travel on a busy street. Everyone has to walk on the street causing a safety issue for both pedestrians and drivers." - Oʻahu Resident

Creating a Safer System

IF WE WANT TO SEE CHANGE, WE CAN'T APPROACH TRAFFIC SAFETY THE SAME WAY.

We are working to define a set of actions to reduce and ultimately eliminate traffic deaths and serious injuries on our streets.

Safe System – A Change in Approach

Traditional Safety Principles	 Prevent Crashes	 Improve Human Behavior	 Control Speeding	 Individuals are Responsible	 React Based on Crash History
Safe System Principles	 Prevent Death and Serious Injury	 Design for Human Mistakes and Limitations	 Reduce the Impact of Crashes	 Shared Responsibility	 Proactively Identify and Address Risks

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Safe System Elements

Safe Road Users

Post-Crash Care

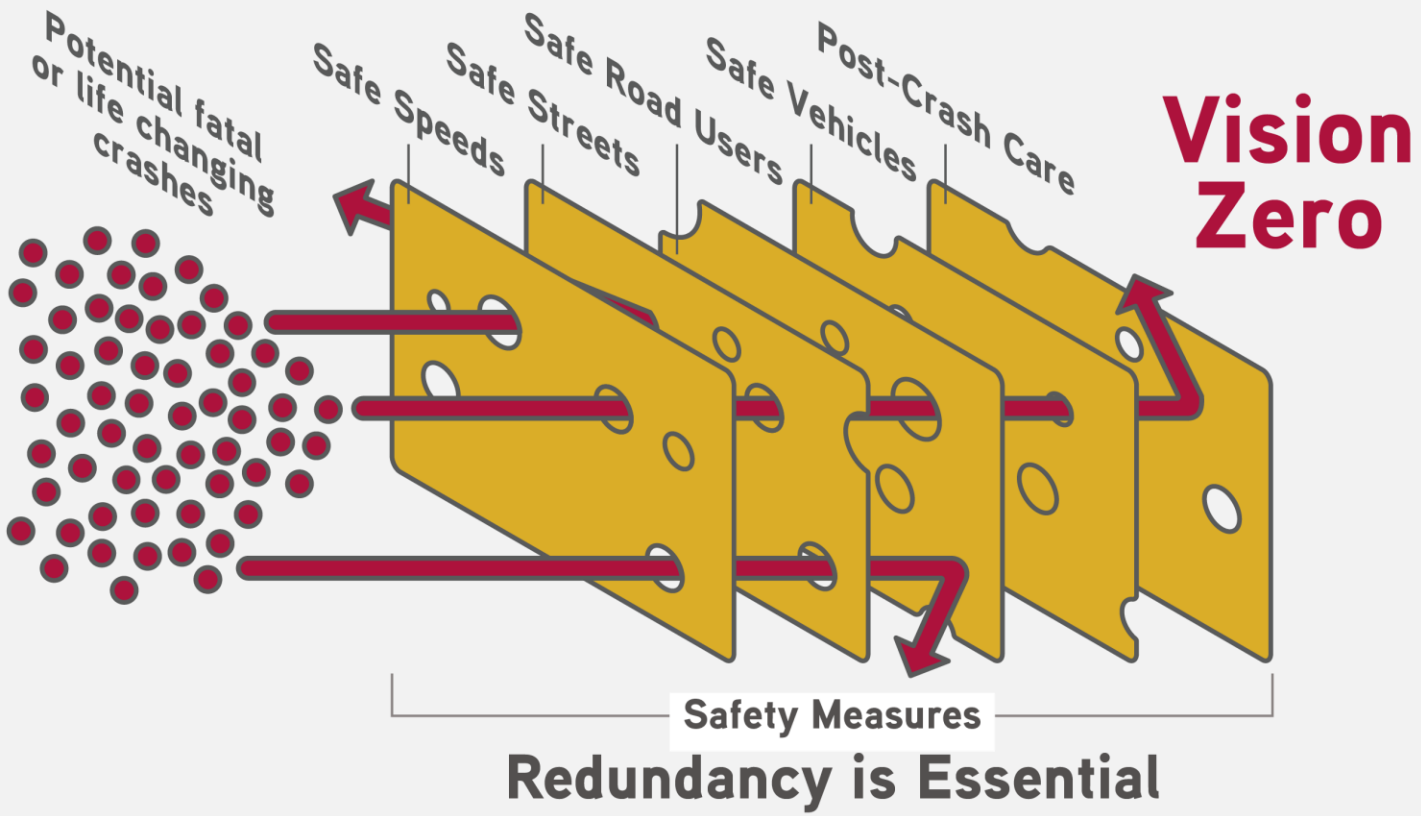
Safe Vehicles

Safe Speeds

Safe Streets

Safe System Approach

The loss of life and injury on our streets is not inevitable, it is preventable.

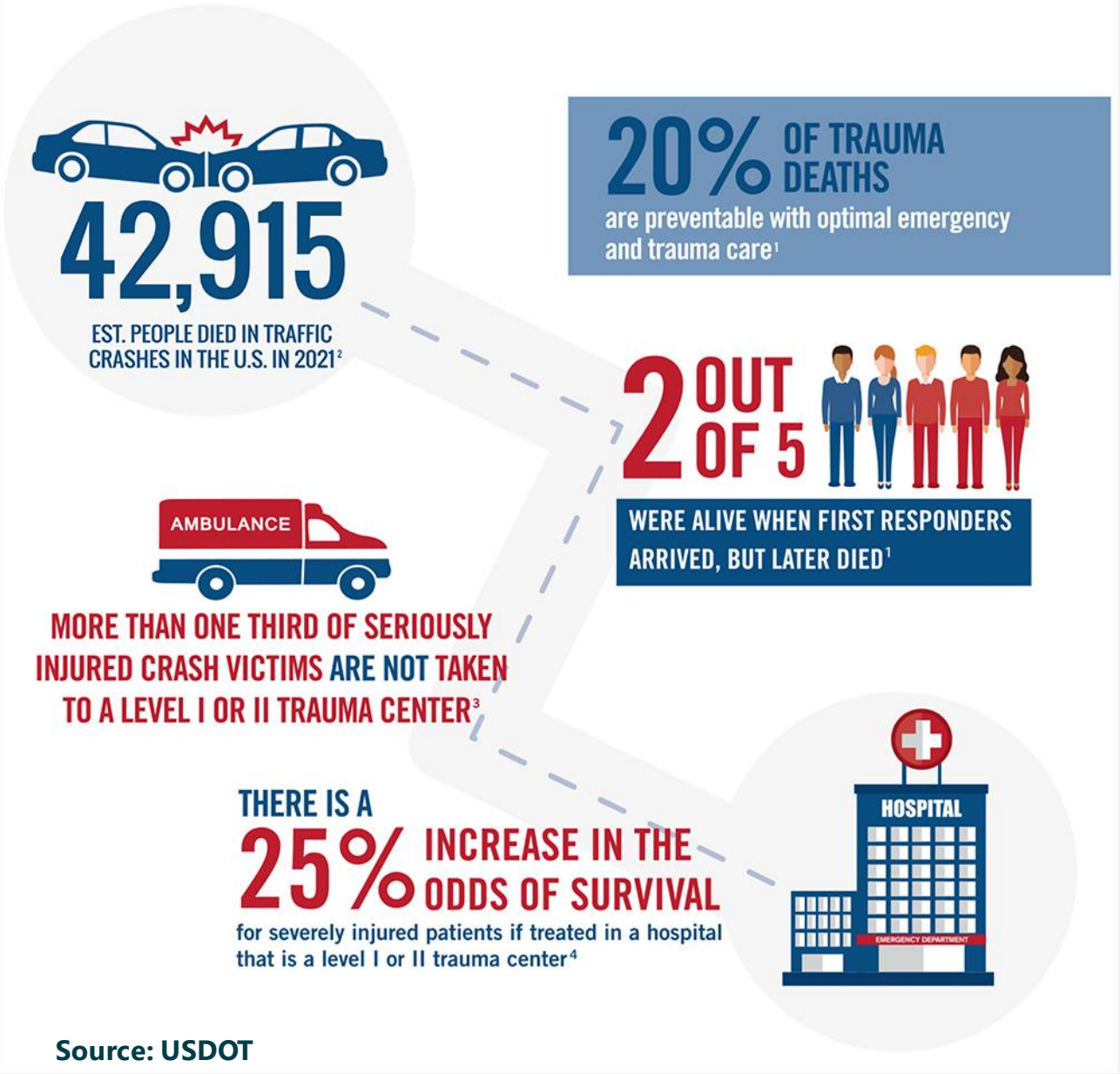


Safe Road Users

Safe Road Users

Post-Crash Care

Post-Crash Care



Source: USDOT

Safe Vehicles

Safe Vehicles

Forbes Subscribe Sign In

Biden's $1.2 Trillion Infrastructure Bill Hastens Beacons For Bicyclists And Pedestrians Enabling Detection By Connected Cars

Safe Speeds and Safe Streets

Safe Speeds

Safe Streets

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Safe Streets Toolkit

What are the safe streets tools?

- **Countermeasures**
  - Proven and promising projects, programs, and policies for reducing traffic deaths and serious injuries
  - Specific countermeasures have been studied to address different crash types

How do we select countermeasures?

Identify Crash Type:

- Speeding
- People Walking in Crosswalks
  - Signalized & Unsignalized
- Kūpuna Walking
- People Biking
- Hit Objects
- Impairment

Select Countermeasure
according to crash type & level of effectiveness

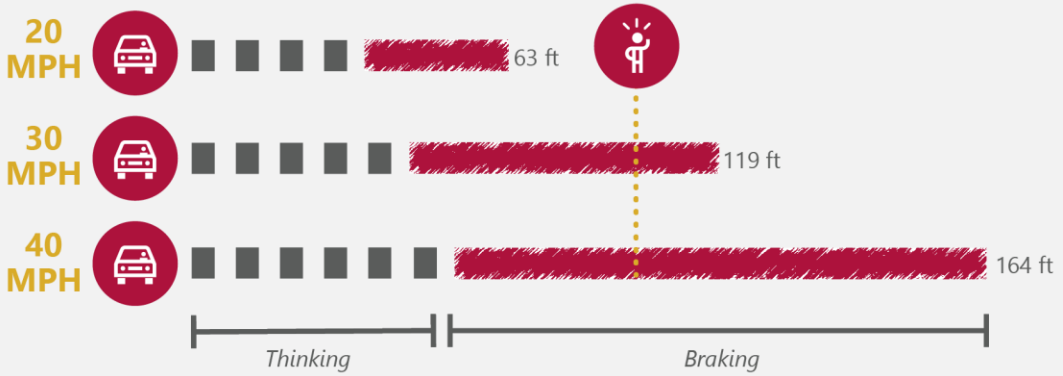
How do we select the best countermeasure?

A Crash Reduction Factor (CRF) tells us how effective the tool is at reducing crashes.

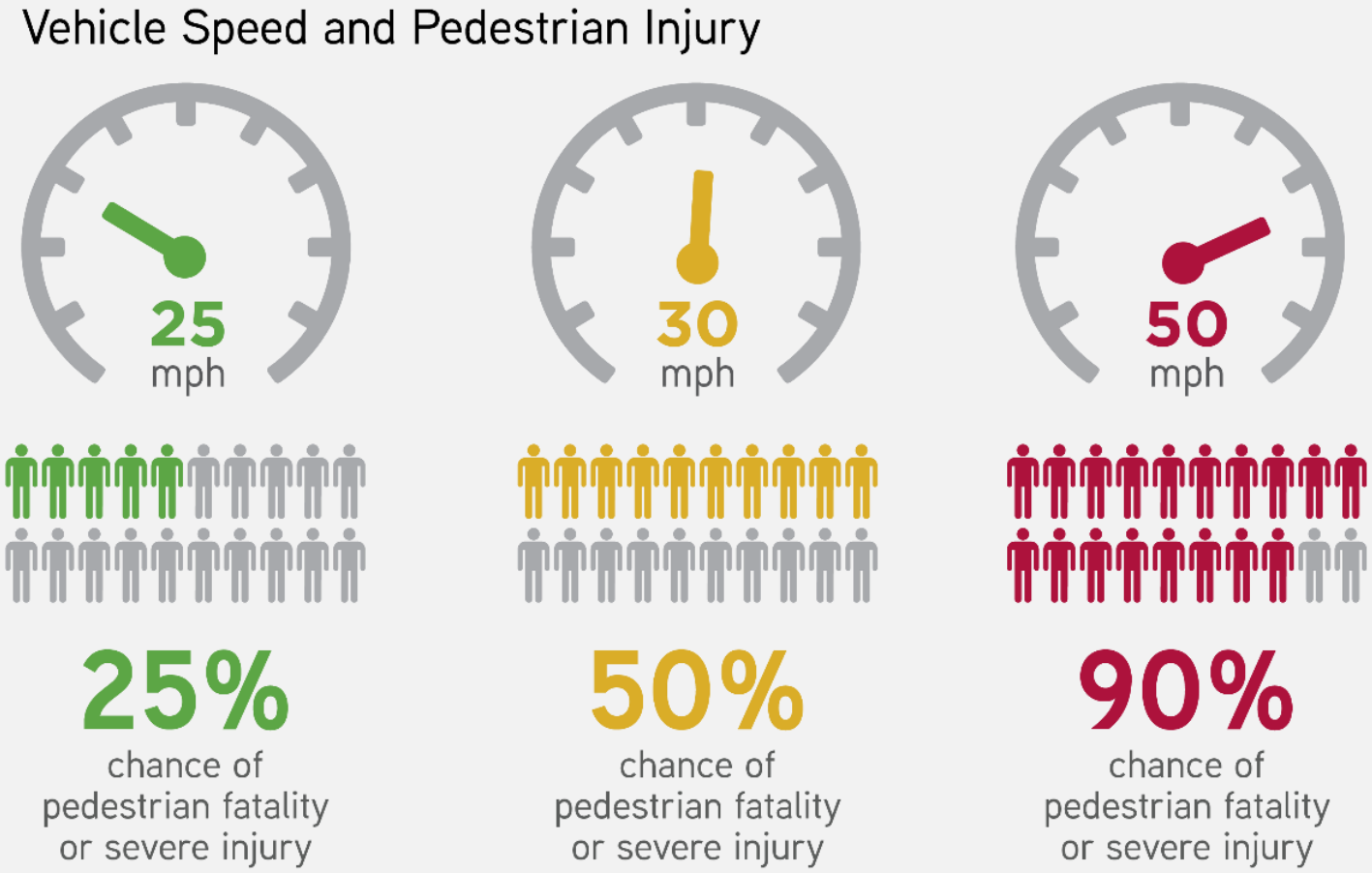
CRF describes the percent of crashes that can be avoided in the future based upon application.

	CRF	Effectiveness
★	1% - 25%	Somewhat Effective
★★	26% - 50%	Moderately Effective
★★★	51%+	Effective

Speed Matters



Speed Matters



Source: Tefft, Brian, 'Impact speed and a pedestrian's risk of severe injury or death' (Accident Prevention and Analysis, 2013)

Countermeasures to Reduce Speed

DESIGN

Countermeasures	Effectiveness
Lane Repurposing/ Road Diet	★★ 19% - 47%
Traffic circles / Roundabout	★★★ 78% - 82%
Speed Humps	★★ 40% - 50%
Turn Wedges	Not Proven

Speed Humps ★★

Lane Repurposing / Road Diet ★★

Traffic Circles/Roundabout ★★★

Turn Wedge

Countermeasures to Reduce Speed

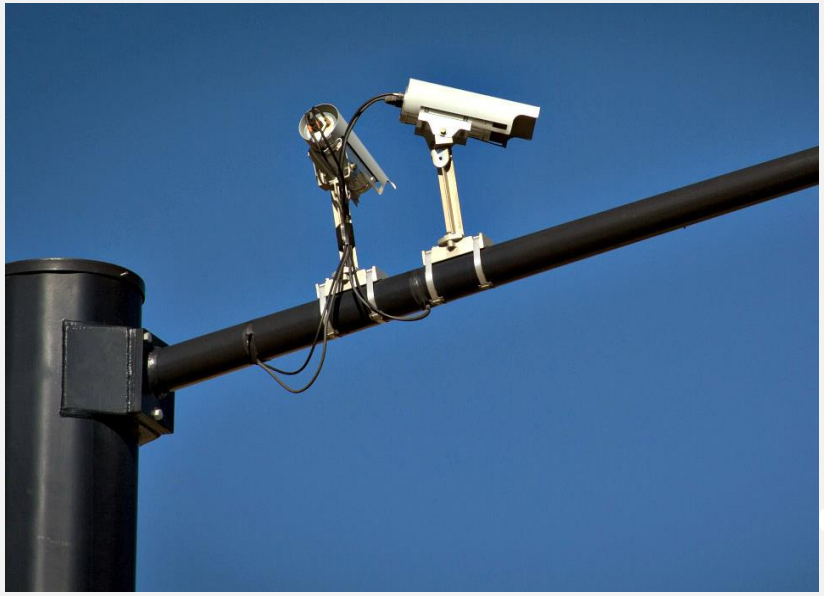
TECHNOLOGY AND PROGRAMS

Countermeasures	Effectiveness
Speed cameras	★★★ 47% - 54%
Speed limit reduction	Proven, No CRF
Speed awareness campaigns	Not Proven
Variable Speed Limits	★★ 34% - 51%

Variable Speed Limits ★★

Speed Awareness Campaigns

Speed Cameras ★★



People Walking are Vulnerable at Intersections

- Intersections are focused points of activity where many modes have conflicting concurrent movements
- Complex decisions are made here with pressure to find appropriate gaps for crossing or turning, while risking rear-ends from behind
- People walking and bicycling are small compared to other road features and can be hard to see

Countermeasures to Protect People Walking

- Driver Report Card signs document the percentage of drivers yielding to pedestrian
- Deployment in coordination with engineering and education measures can increase yielding and improve safety

Countermeasures to Protect People Walking

CROSSING IN UNSIGNALIZED CROSSWALKS

Countermeasures	Effectiveness
RRFB or PHB	★★★ 47% - 55%
Speed tables	★★ 46%
Pedestrian crossing refuge	★★★ 56%
Lane reduction/road diet	★★ 19% - 47%
Curb extensions	Not Proven
Advance Stop Markings	★ 25%
Intersection Lighting	★★ 42%

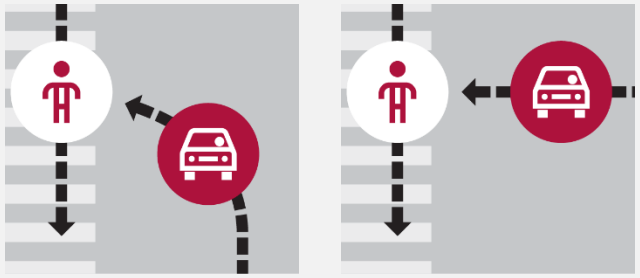
Pedestrian crossing refuge ★★★

Rapid Rectangular Flashing Beacon ★★★

Curb extensions

Countermeasures to Protect People Walking

CROSSING IN SIGNALIZED CROSSWALKS

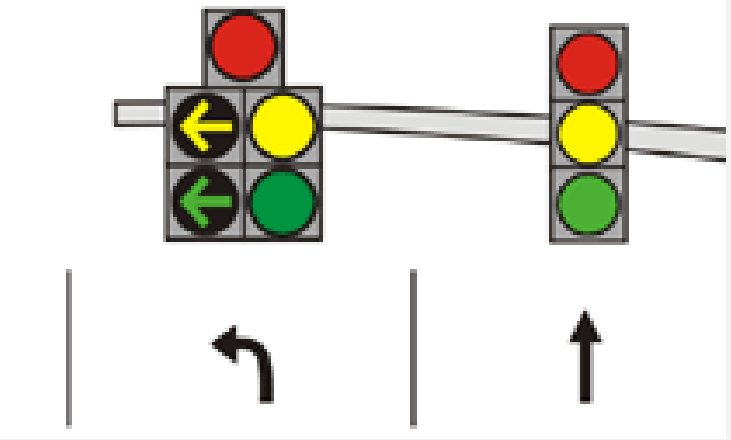


Countermeasures	Effectiveness
Leading Pedestrian Interval	★ 13%
Pedestrian crossing refuge	★★★ 56%
Curb extensions	Not Proven
Protected Left Turns	★★ 32%-65%
High Visibility Crosswalk	★★ 40%
Intersection Lighting	★★ 42%
Centerline Hardening	Not Proven

Centerline Hardening

Pedestrian Crossing Refuge ★★★

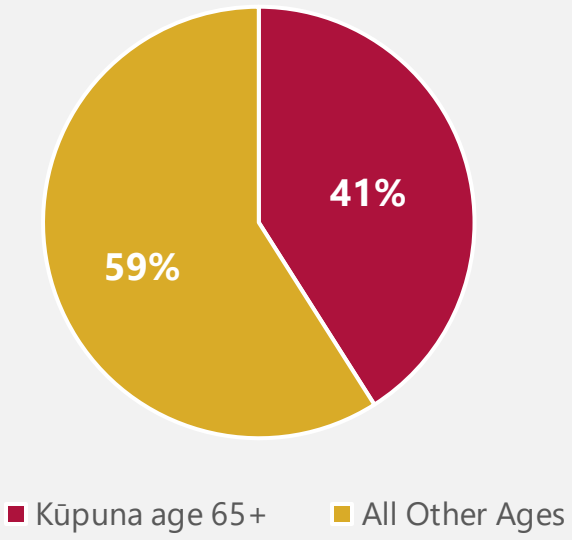
Protected Left Turn ★★



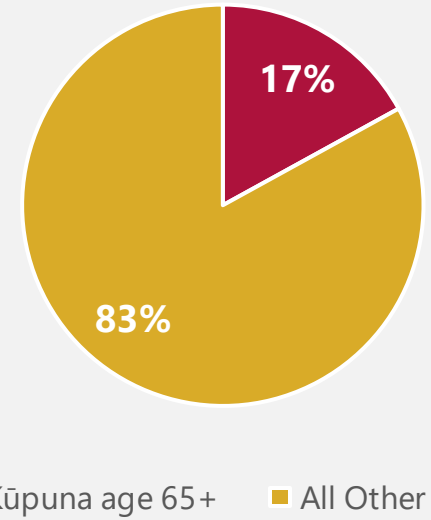
Kūpuna Need More Support

- **Kūpuna age 65 and older make up 41% of people killed while walking** compared to 17% of O'ahu's population
- Kūpuna are more vulnerable to higher speed crash impacts

Deaths from Crashes Involving People Walking



Total Population



Countermeasures to Protect Kūpuna

Countermeasures	Effectiveness
Leading Pedestrian Interval	★★ 13%
Pedestrian crossing refuge	★★★ 56%
Curb extensions	Not Proven
High Visibility Crosswalk	★★ 40%
Intersection Lighting	★★ 42%

Leading Pedestrian Interval ★

Curb extensions

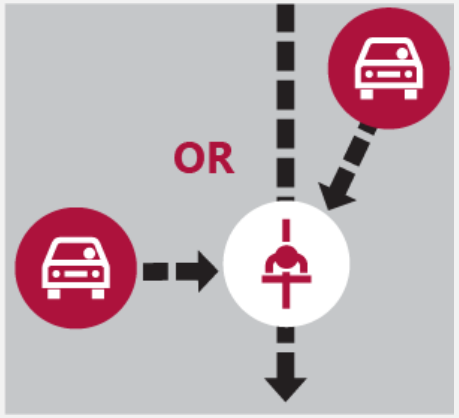
Pedestrian crossing refuge ★★★

People Biking Need More Support

- **People riding bicycles are getting hit while riding on streets without dedicated bike facilities.** Many O'ahu streets lack bike lanes, which creates a safety concern for people riding bicycles.
- **People riding bicycles are commonly hit at intersections.** Intersections need greater protection for people riding bicycles.

Countermeasures to Protect People Biking

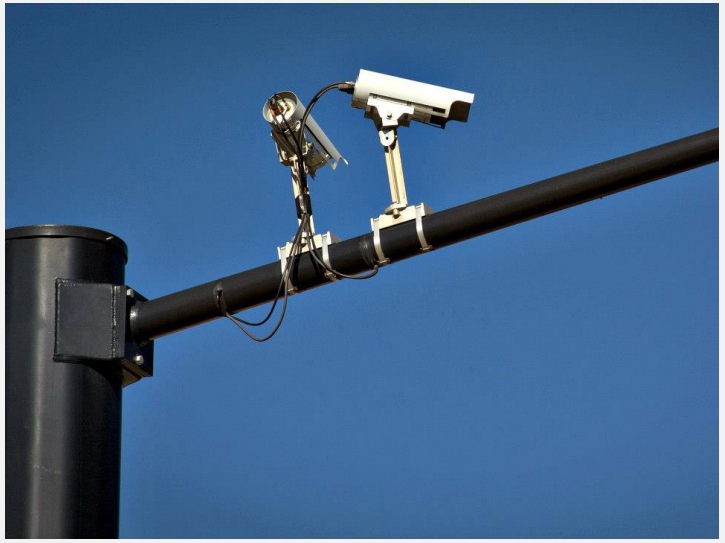
ON STREETS WITHOUT BIKE FACILITIES



Countermeasures	Effectiveness
Bike Lanes/Protected Bike Lanes	★★ 30% - 49%
Speed Cameras	★★★ 47% - 54%
Driveway Signage	Not Proven
Enforcement to Eliminate Parking in protected Bike Lanes	Not Proven
Off-Street Bike Path	Not Proven

Bike Lanes, Protected Bike Lanes ★★

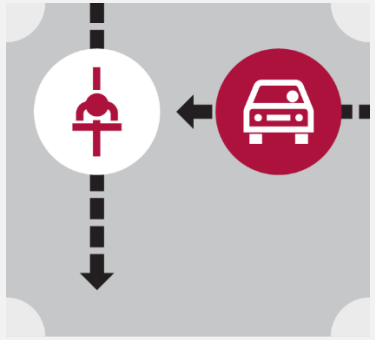
Speed cameras ★★★



Off-Street Paths ★★

Countermeasures to Protect People Biking

AT INTERSECTIONS



Countermeasures	Effectiveness
Bike Lanes through intersections	★★ 30% - 49%
Traffic Circles / Roundabout	★★★ 78% - 82%
Prohibit left-turns with sign	★★★ 68%
Protected intersection	Not proven
Bike Box	Not proven

Diverters

Protected Intersections

Bike Boxes

Bike Lanes Through Intersections ★★

Traffic Circles / Roundabouts ★★★

NACTO images

Distracted & Impaired Driving is Deadly

- Strategies that cause people to drive a slower speeds will make inattention and impairment-involved crashes less severe
- **Mistakes in judgment should not result in fatal outcomes** for drivers, their passengers, or other people on the road

Countermeasures to Curb Inattention & Impairment

Countermeasures	Effectiveness
Median Barrier	★★★ 97%
Wider Edge Lines	★★ 22% - 37%
Rumble Strips	★★ 44% - 64% (centerline) 13% - 51% (shoulder)
Sobriety Checkpoints and Saturation patrols	★ (7% to 17%)

Median Barriers ★★★

Sobriety Checkpoints ★

Wider Edge Lines ★★

Rumble Strips ★★

Breakout Session

Choose a safe streets toolkit and engage with technical experts to provide feedback on the proposed countermeasures and provide your thoughts on other tools

Safe Streets Tools	Breakout Room Number
Tools to support people crossing in crosswalks	**#1**
Tools to protect Kūpuna	**#2**
Tools to reduce speed	**#3**
Tools to support people riding bicycles	**#4**
Tools to curb impaired + distracted driving	**#5**

Breakout Session Questions

- What about this crash type prompted you to join this room?
- How open are you to the countermeasures proposed in this presentation?
- What other solutions would you like us to consider that weren't raised tonight?
- What concerns, if any, do you have with the strategies that have been proposed?
- What are the acceptable trade-offs you are willing to make to guarantee safer roads for all?

Kuleana on Safer Speeds

Vision Zero Lessons From Peer Cities

- Coordinate with partner agencies, non-profits and community-based organizations to plan, implement, and carry out Vision Zero programming
- Data should inform the development and implementation of education campaigns

Vision Zero Messaging Considerations

- **Shared Responsibility**: How can we encourage a sense of shared responsibility amongst all stakeholders (planners, engineers, policymakers, road users, etc.)?
- **Empathy/Community**: How can we encourage a sense of empathy for self and community?
- **Accessibility:** How can we promote mobility/accessibility for all communities, including elderly and disabled populations?
- **Equity:** How can Vision Zero address inequity and promote equitable outcomes across race, gender, and class?

Speaking Effectively about Speed

What would motivate people you know to stop and think about the impact of their choices on how fast to drive?

- How likely it is to kill someone at different speeds
- How long it takes to stop at different speeds
- How speed impacts your visibility of the road
- How speeding saves little time and can have grave impacts
- Something else?

Next Steps

Next Steps

- Submit personal testimonials
- Upcoming online survey: January 2023
- Identification of High-Injury Streets and Intersections
- Vision Zero Toolkit – Educational Campaign
- Future Public Meeting: mid-2023

https://www.jotform.com/222936440790156

Scan here to submit your story!

Mahalo!

Contact Us:
completestreets@honolulu.gov

Vision Zero Website:
https://www.honolulu.gov/completestreets/visionzero